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GLOBAL RISK

President's Message: Reinvention And Renewal

05.10.16 | 5 MIN READ | TEXT BY CHARLES D. FERGUSON, PH.D.

From its inception 70 years ago, the founders and members of the Federation of American Scientists were reinventing themselves. Imagine yourself as a 26-year old chemist having participated in building the first atomic bombs. You may have joined because your graduate school adviser was going to Los Alamos and encouraged you to come. You may also have decided to take part in the Manhattan Project because you believed it was your patriotic duty to help America acquire the bomb before Nazi Germany did. And even when Hitler and the Nazis were defeated in May 1945, you continued your work on the bomb because the war with Japan was still raging in the Pacific. Moreover, by then, you may have felt like Dr. J. Robert Oppenheimer, the Scientific Director, that the project was "technically sweet"—you had to see it through to the end.

But when the end came—the atomic bombings of Hiroshima and Nagasaki—in August 1945, you may have had doubts about whether you should have built the bombs, or you may have at least been deeply concerned about the future of humanity in facing the threat of nuclear destruction. What should you then do? About a thousand of the "atomic scientists" throughout the country at various sites, such as Los Alamos, Oak Ridge, Hanford, and Chicago began to organize and discuss the implications of this new military technology.[1]

This political activity was not natural for scientists. Almost all of the founders of FAS were so-called "rank-and-file" scientists in their 20s and 30s. Members of this youth brigade—led by Dr. Willie Higinbotham, who was in his mid-30s but who looked younger—arrived in Washington. With their "crew cuts, bow ties, and tab collars [testifying] to their youth," they roamed the halls of Capitol Hill, educating Congressmen and their staffs.[2] *Newsweek* called them the "reluctant lobby." As a history of the Atomic Energy Commission (AEC) notes, "Part of their reluctance stemmed from their conviction that the cause of science should not be dragged through the political arena."[3]

Fortunately, these scientists persisted and achieved the notable result of successfully lobbying for civilian control of the AEC. While they also wanted international control of nuclear energy, they fell short of that goal. However, they were indefatigable in their educational efforts on promoting peaceful uses of nuclear energy and warning about the dangers of nuclear arms races.

Throughout FAS's seven decades, the organization has transformed itself into various incarnations depending on the issues to be addressed and the resources available for operating FAS. To learn about this continual reinvention, I invite you to read all the articles in this special edition of the *Public Interest Report*. This edition has an all-star list of writers—many of whom have served in leadership roles at FAS and others who have deep, scholarly knowledge of FAS. These authors discuss many of the accomplishments of FAS, but they also do not shy away from mentioning several of the challenges faced by FAS.

What will FAS achieve and what adversities will occur in the next 70 years? As scientists know, research results are difficult, if not impossible, to predict. However, we do know that the mission of FAS is as relevant as ever, perhaps even more so than it was 70 years ago. Nuclear dangers—the founding call to action—have become more complex; instead of one nuclear weapon state in 1945, there are now nine countries with nuclear arms. Instead of a few nuclear reactors in 1945, today there are more than 400 power reactors in 31 countries and more than 100 research reactors in a few dozen countries. Moreover, some non-nuclear weapon states have acquired or want to acquire uranium enrichment or reprocessing facilities that can further sow the seeds of future proliferation of nuclear weapons programs. For these dangers alone, FAS has the important purpose to serve as a voice for scientists, engineers, and policy experts working together to develop practical means to reduce nuclear risks.

FAS has also served and will continue to serve as a platform for innovative projects that shine spotlights on government policies that work and don't work and how to improve these policies. In particular, for a quarter century, the Government Secrecy Project, directed by Steve Aftergood, has worked to reduce the scope of official secrecy and to promote public access to national security information.

Nuclear energy research travel (cosponsored by FAS) to the Republic of Korea, November 7, 2013, taken at Gyeongju National Museum: From left to right: Paul Dickman, Argonne National Laboratory, Lee Kwang-seok, Korea Atomic Energy Research Institute, Florence Lowe-Lee, Global America Business Institute, Everett Redmond, Nuclear Energy Institute, and Charles D. Ferguson, FAS.

FAS has also contributed to the public debate on bio-safety and bio-security. Daniel Singer (one of the contributors to this issue) and Dr. Maxine Singer have been active for more than 50 years in bio-ethics. Dr. Barbara Hatch Rosenberg and Dorothy Preslar in the 1990s and early 2000s worked through FAS to develop methods (such as an email list serve, which was cutting edge in the 1990s) to connect biologists and public health experts around the globe to identify, monitor, and evaluate emerging diseases. In recent years, Chris Bidwell, Senior Fellow for Law and Nonproliferation Policy, has led projects examining potential biological attacks or outbreaks and the forensic evidence needed for a court of law or government decision making in countries in the Middle East and North Africa. The Nuclear Information Project, directed by Hans Kristensen, continues its longstanding work on providing the public with reliable information and analysis on the status and trends of global nuclear weapons arsenals. Its famed *Nuclear Notebook*, co-authored by Kristensen and Robert S. Norris, a senior fellow at FAS, is one of the most widely referenced sources for consistent data about the status of the world's nuclear weapons.

I believe the greatest renewal and reinvention of FAS has been emerging in the past three years with the creation of networks of experts to work together to prevent threats from becoming global catastrophes. FAS has organized task forces that have provided practical guidance to policy makers about the implementation of the agreement on Iran's nuclear program and that have examined the benefits and risks of the use of highly enriched uranium in naval nuclear propulsion. As I look to the next 70 years, I foresee numerous opportunities for FAS to seize by being the bridge between the technical and policy communities.

I am very grateful for the support of FAS's members and donors and encourage you to invite your friends and colleagues to join FAS. Happy 70th anniversary!

1

Alice Kimball Smith, A Peril and a Hope: The Scientists' Movement in America 1945-47 (Cambridge, Massachusetts, The MIT Press, 1971).

2

Richard G. Hewlett and Oscar E. Anderson, Jr., The New World, 1939/1946: Volume I, A History of the United States Atomic Energy Commission (The Pennsylvania State University Press, 1962), p. 448.

3

Ibid.

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